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#### ABSTRACT

The need for experts from related disciplines to aid in learning diagnosis and prognosis is discussed. While support for a multi-causation theory of reading disability has been general for many years, it has not led to action, as reflected in the lack of an interdisciplinary approach to learning disabilities in many schools, reading centers, and clinics. Specific diagnostic information must be obtained if appropriate instructional strategies and remedial methods are to be employed. Six levels of diagnosis are suggested, including descriptions of (1) reading performance, (2) behavior affecting reading performance, (3) a detailed analysis of the child's reading process, (4) mental ability, (5) medical problems affecting learning, and (6) family attitudes contributing to learning problems. Examples are given for interdisciplinary areas of evaluation and for the effective use of specialists from other related fields. The experimental interdisciplinary program in Reno, Nevada, is cited. References are included. (WB)



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DIAGNOSIS AND PROGNOSIS: An Interdisciplinary Approach

Reading teachers, clinicians and reading specialists throughout the United States have supported the theory that reading disabilities are caused by many different facets of the learning process. Yet, this has not led these same reading experts toward an approach for diagnosis and prognosis that reflects the multiple-causation theory of reading disability. If this theory is tenable, an interdisciplinary approach to diagnosis and prognosis is essential.

Very often the diagnosis of a student with a reading problem consists chiefly of tests to determine the extent of reading disabilities or to



evaluate the student's performance in reading. An attempt to determine the causes of this disability beyond the reading achievement level is often neglected. If the diagnosis does go beyond the reading performance level it often goes into visual or auditory screening and intelligence testing. The results of this type of a diagnosis is not an attempt to uncover the multiple causes that many reading experts claim cause reading disabilities. It is an inadequate diagnostic study which can only lead to an inadequate remedial program for the student.

A questionnaire sent to the Connecticut Association for Reading Research, was reported by Criscuolo (1). The respondents indicated that the determination of whether a child has a reading disability should involve the concerted effort of the classroom teacher, principal, reading specialist, guidance counselor, psychologist and school nurse. The respondents felt that this approach was necessary because of the multiple-causation factor in reading disability.

# Levels of Diagnosis

In the International Reading Associations' Target Series Book Three - Treating Reading Disabilities: The Specialists Role (3), levels of diagnosis are discussed. Four levels of diagnosis are pointed out. These were:

- 1. Description of performance.
- 2. Behavior affecting reading performance.
- 3. Specific analysis of reading process.
- 4. Determination of mental ability.



These four areas are indeed a vital and important part of any extensive evaluation of a student's reading problem; however, more information is needed concerning his learning problems if an interdisciplinary approach is really functional. Added to the above four levels should be:

- 5. Evaluation of medical problems affecting learning.
- 6. Family attitudes contributing to learning problems.

In the first level of diagnosis, the reading performance of the child is observed by the classroom teacher. Strengths and weaknesses in vocabulary, word recognition skills and comprehension are determined through observation, informal teacher-made tests and group standardized tests. The classroom teacher should also observe the child's performance in other academic areas. Special attention should be given to the pupil's functioning in communication areas such as listening, speaking and writing as well as reading. The method in which the child attacks thought problems in any area of the curriculum would also be helpful in the diagnosis.

At the se and level of diagnosis, the student's attitudes toward reading are avaluated. This is accomplished through classroom observation and by the use of attitude and personality tests. This may point out his attitudes toward reading and poor work habits. An interest inventory and autobiographical sketch written by the child would be most helpful in an interdisciplinary approach to the reading disability.

On the third level of diagnosis the remedial reading teacher or reading specialist becomes involved. At this level, the reading specialist makes a more specific analysis of the process of reading by determining association, assimilation, analysis and evaluation which lead to motor,



visual or vocal output. The reading specialist's use of standardized tests of specific skills as well as informal tests and observation will aid in the interdisciplinary approach to diagnosis.

The fourth level of diagnosis involves testing procedures that require the trained abilities of a psychologist or clinician. The child's mental abilities, memory and his association and reasoning abilities are determined. Standardized tests such as the Wechsler Intelligence Scale for Children, and memory and associative tests are available for diagnosis at this level. Along with standardized tests, informal tests and observation are also essential at this level of the evaulation.

The fifth level of diagnosis adds medical information to the interdisciplinary approach to reading diagnosis. At this level the medical evaluation would entail examinations by the family doctor or pediatrician, the ophthalmologist, orthoptist, otologist and neurologist. Possibly a psychiatrist may also be consulted. Since reading disability is a complex problem with many possible etiologies, this level combines the medical and educational evaluation to the interdisciplinary approach for diagnosis.

At the sixth level of diagnosis family background and parental attitudes are evaluated as possible contributing factors to the child's learning difficulties. From the parents, birth information, developmental and medical history, school history, home background, behavior, interests and attitudes are obtained. After this information is received from the parents it should be compared to the reports from the classroom teacher and the school for similarities and differences. Also information received from the parents is valuable for the complete diagnosis because much of



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this information is not observable in a classroom or clinic situation.

The reading Specialist in an Interdisciplinary Approach

In instances where an interdisciplinary approach to diagnosis for
reading difficulties has been implemented, the reading specialist's work
and responsibilities have been increased immeasurably. It is quite apparent
that the reading specialist, with his training in the areas of psychology,
child development, educational methods, communication skills, learning
problems and specifically reading, would be the individual who would
direct and coordinate the interdisciplinary approach to reading diagnosis.
The reading specialist is probably more capable than other area specialists
in interpreting the various reports and evaluations from this team approach
and directing the team efforts to the problem of teaching the child to
read. This is certainly no easy task because when experts from the
various disciplines discuss diagnosis from their particular point of view,
there is difficulty in communicating with one another.

# An Interdisciplinary Program

An interdisciplinary approach to reading difficulties is operating on an experimental basis in Reno, Nevada (2). The personnel at the University of Nevada's Reading Clinic, the Washoe County School District and the Medical Facilities in the Reno area have combined their disciplines into one comprehensive diagnostic program. It was felt that by combining the available medical and educational disciplines of the community into one program, the children who have severe reading problems would be better served.



Upon discovery of a severe reading disability, the classroom teacher may refer the child to the program after consulting with the principal, reading teacher, school nurse and the school counselor. The first level of diagnosis, description of performance, and the second level of diagnosis, behavior affecting reading performance, are usually accomplished at this time by the classroom teacher, principal and possibly the reading teacher or school counselor. Observational reports, interest inventories, school nurse's records, school cumulative files, standardized and informal tests concerning the child referred are collected and forwarded to the University of Nevada's Reading Clinic.

The next step in this program is taken when the parents, referred by the school personnel takes the child to the Reading Clinic, (A physician may also initiate referral to the program.) At the Reading Clinic, the third level of diagnosis, specific analysis of the reading process and part of level four, determination of mental abilities, are completed at the Clinic. Also assisting in the level four diagnosis are personnel from the Washoe County School Districts. These psychometrists measure various mental abilities and give other specific learning tests. An informal psychological examination for emotional problems is also given each child by a psychologist from the Washoe County School District.

At level five, evaluation of medical problems affecting learning, the child is examined by the family doctor or pediatrician, the ophthalmologist, orthoptist, and neurologist. The neurological examination may require an electroencephalogram (EEG). Depending upon the findings of the school psychologist and the medical examiners, a psychiatrist may be consulted.



The child is given an audiogram which is administered by an otologist in the Speech and Hearing Clinic at the University of Nevada.

While the evaluation is in progress at the Reading Clinic, the parents are interviewed concerning the child's home background and his attitudes and interests. An additional parent questionnaire is completed by the parents and mailed to the Clinic to further clarify certain family attitudes that might contribute to learning difficulties. Parole officers and social workers may also contribute to this sixth level of diagnosis, family attitudes contributing to learning problems.

Reports from the entire work-up in all six levels of diagnosis are channeled to the Reading Clinic at the University of Nevada, where an Evaluation Board meets for a final analysis of the individual child's problem. Basically, the Board consists of a medical doctor, a representative from the Reading Clinic and a representative from the Washoe County School District. This group analyzes and incorporates all of the reports, tests and materials of the child into one case study. Specialized professional people may be called in as deemed necessary at any particular time during the final analysis.

Once the evaluation is made, the appropriate referrals for treatment are made. This may be remedial reading started, medical problems corrected, emotional problems handled, home environment aided, etc. The Evaluation Board and especially the reading clinician continues to assist in the therapy for these children who are referred for this program.

#### SUMMARY

The comments in this paper concerning the interdisciplinary approach



to diagnosis and prognosis has mentioned only a few ideas that people from Various disciplines involved in the child's learning process may aid one another in an integrated and more comprehensive and complete diagnosis. There are many other ways an interdisciplinary approach could be organized. If one truly acknowledges the multiple-causation theory of reading disability, then it follows that one needs a multiple-discipline approach in solving the reading disabilities of children.

The interdisciplinary approach focuses attention on the individual child and his learning problems. Many factors must be considered before an adequate explanation can be made of the child's inability to read effectively and by utilizing the many discipline experts in this explanation, it will do much toward solving this problem for the individual child.

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